ACT-IR220L+/220L/200L
IrDA PC Adapter

User's Manual



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Release 1.5

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FCC & VCCI Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1)This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.
WARNING-FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user authority to operate this equipment

NOTE: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Increase the separation between the equipment and receiver.
-Reorient or relocate the receiving antenna.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for helps.

This equipment is in the 2nd Class category (information equipment to be used in a residential area there to) and conforms to the standards set by the Voluntary Control Council For Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in such residential area.
When used near a radio or TV receiver, it may become the cause of radio interference. Read the instructions for correct handling.

NOTE: Must be used with shielded cable only.

FOR YOU RECORDS
For your assistance in reporting this product in case of loss or theft, please record the model and serial number that is located on the bottom of the case. Please retain this information.

Model Number	Serial Number
Date of Purchase	Place of Purchase

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INTRODUCTION

This document provides instructions to install the ACT IR220L+/220L/200L Serial-IR dongle along with Windows 98/ME/2000 device driver. It is assumed that the user is familiar with basic operation of Window 98/ME/2000.

PACKING LIST

When you unpack the package, the following items should be found.

1. ACT-IR220Lplus or ACT-IR220L or ACT-IR200L.
2. User's Guide

SYSTEM REQUIREMENTS

To use ACT-IR220L+/220L/220L, your computer MUST meet the following requirements.

1. Window 98/ME/2000.
2. One unoccupied Serial (Rs232) COM port .
3. One unoccupied virtual comport (Com4)

BIOS SETUP Verification

Before installing the device driver, you **MUST** setup or verify your BIOS **FIRST**. Below demonstrates a example of ACT-IR220L+ being installed on Com2.

1. Choose **PNP & PCI** from **BIOS SETUP**
PNP OS Installed: **NO**
Resource Controlled by: Manual

2. Choose **Integrated Peripherals** from **BIOS SETUP**
Onboard UART2 Serial Port 2 : 2F8H/IRQ3
Onboard IR function: Disable or
UART2: Normal

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WINDOWS 98 INSTALLATION GUIDE

Precaution: If you have not verified your Bios setup at this point, we strongly recommend you to refer back to the Bios verification section and verify your Bios setup again.

Note: Verify that the Comport you will use to install ACT-IR220L/220L+/200L is not being already used or occupied by any hardware or any software. We recommend users to completely delete any files or drivers that can interrupt clean fresh installation of our product.

Note: You are trying to install a SIR product. Your operating system can always be upgraded to use FIR products. However you can never downgrade from a FIR product to SIR product, therefore verify that you have on previously installed any FIR products on your system.

Following are the instructions to properly install the ACT-IR220L+/220L/200L Dongle. You need a computer system with at least one serial port and Windows 98 already installed. The best choice for the system is a desktop.

1. Connect ACT-IR220L+/200L serial adapter to the COM Port of Desktop PC.
2. Boot up your computer system.
3. Double Click **My Computer** on DeskTop
4. Double Click **Control Panel**
5. Double Click **Add New Hardware** on Control Panel Window.
6. Click **Next**.



7. Click **Next**.



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8. Select **No, the device isn't in the list** in the box. Then click **Next**.	
9. Highlight **Infrared Devices** from the **Hardware types** list, then click **Next**.	
10. Click **Next**.	

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11. From **Manufacturers** list, choose **(Infrared COM port or dongle),** from Infrared Devices list, choose **(Generic Infrared Serial Port or dongle)**. Then click **OK**.



12. Choose **ACTiSYS IR-200L** if you are a ACT-IR 200L user. Then click **Next**.



13. Choose **ACTiSYS IR-220L/ 220L+** if you are a ACT-IR-220L/ ACT-IR220L+ User. Then click **Next**.



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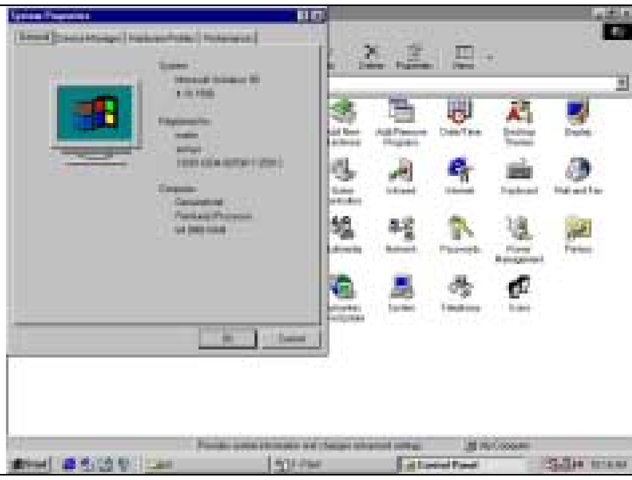
14. Select **COM port** which is physically connected to the Dongle. In most cases, the Dongle is connected to COM2. Choose **Communication Port (COM2)** from the Port list, click **Next**.	

15. Reboot your computer.

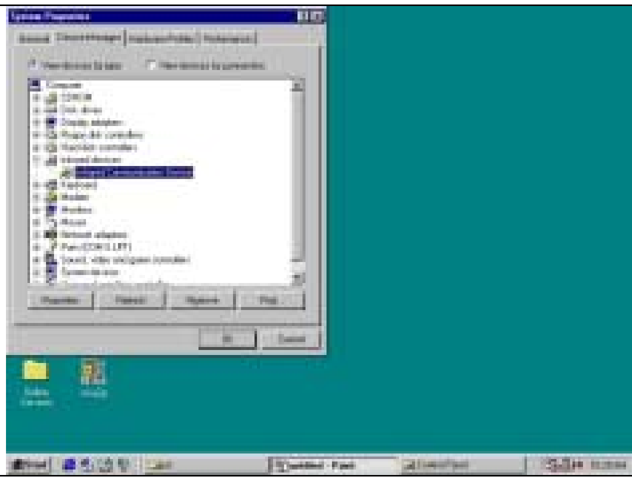
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WINDOWS 98 UNINSTALLATION GUIDE

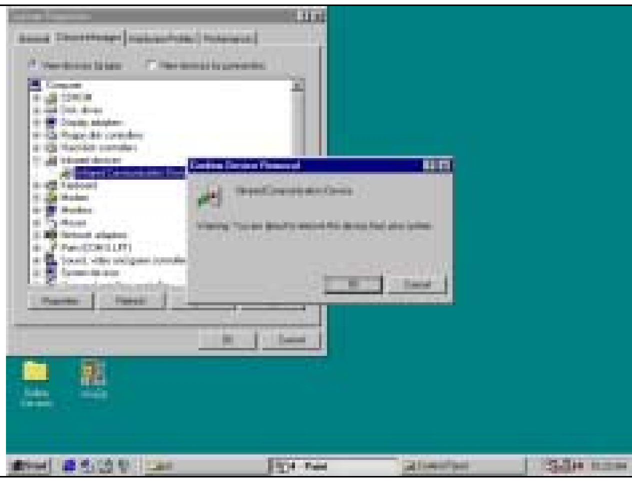
1. Boot up your computer system.
2. Click **Control Panel**.
3. Double click **System** Icon
4. Click **Device Manager** tab.



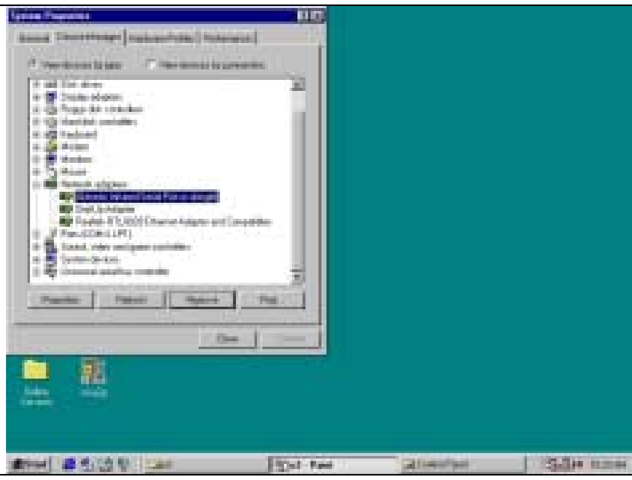
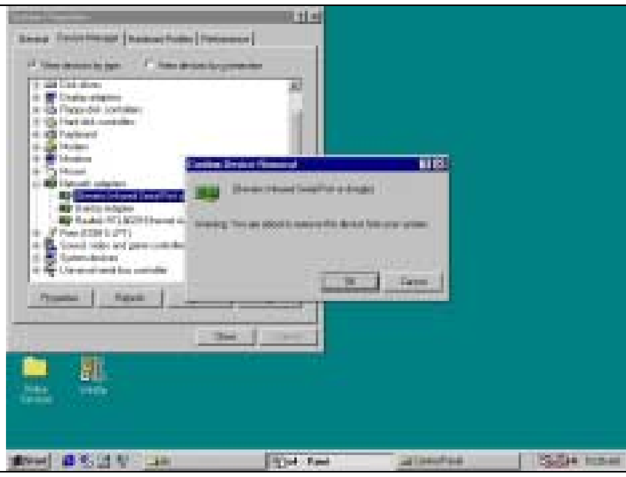
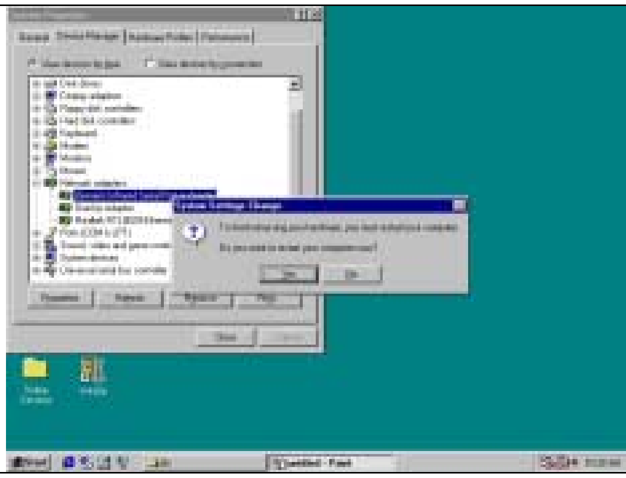
5. Highlight **Infrared Communication Device**, and then click **Remove**.



6. Click **OK** in the **Confirm Device Removal** box.



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7. Highlight **(Generic Infrared Serial Port or Dongle)**, then click **Remove**.	
8. Click **OK** in the **Confirm Device Removal**.	
9. Click on **OK** to restart your computer.	

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WINDOWS 2000 INSTALLATION GUIDE

Note: If you do not change your computer BIOS setting, **STOP** here and go to Chapter BIOS SETUP.

Note: If your computer system has installed some device on the same com port before, you **MUST** properly uninstall the devices first. ACT-IR220L+/220L/200L would **NOT** work with your system any more if the devices are uninstalled improperly because some drivers are still there and cause conflicts with ACT-IR220L+/220L/200L driver. You **HAVE** to re-install your Windows 2000 again.

Note: If your computer system has installed a **FIR** device before, ACT-IR220L+/220L/200L would **NOT** work with your system any more. You **HAVE** to re-install your Windows 2000 again.

Note: If you want use **Virtual COM Port** in your application, **STOP** here and change IR220L+/IR220L/IR200L to USB-IR Dongle.

Following are the instructions to properly install the ACT-IR220L+/220L/200L Dongle. You need a computer system with at least one serial port and Windows 2000 already installed. The best choice for the system is a desktop.

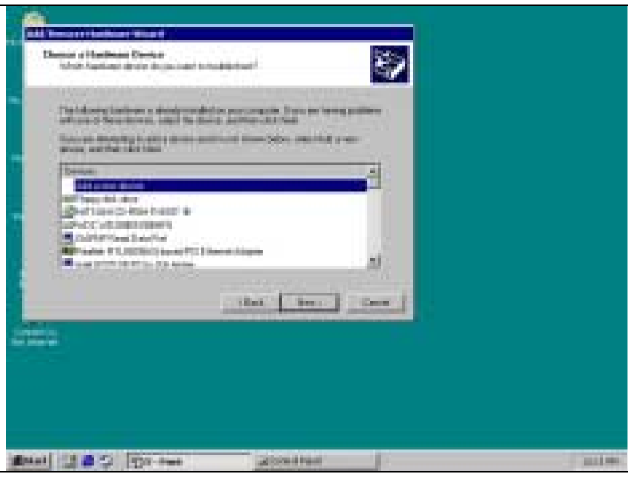
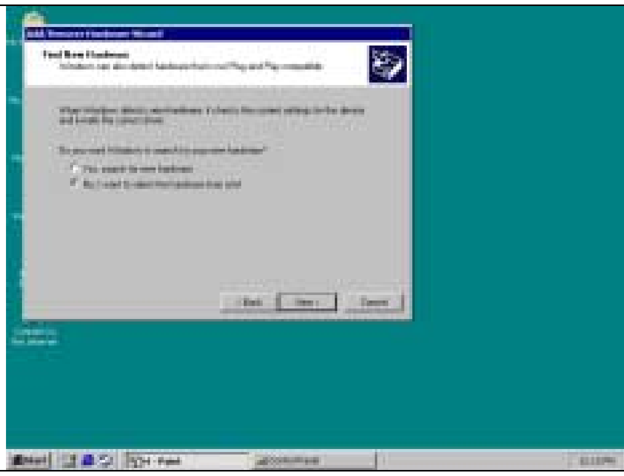
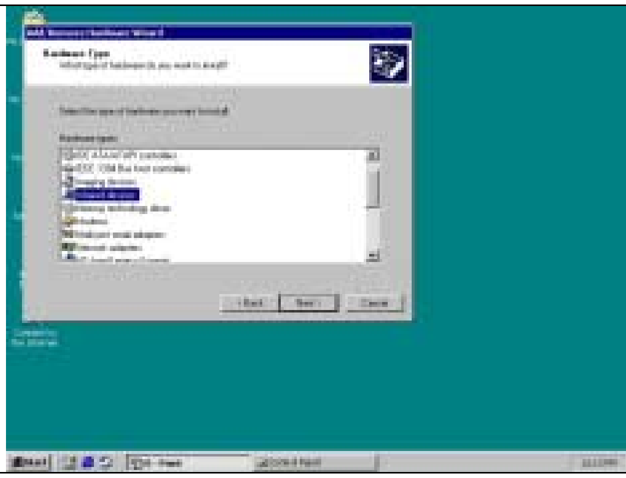
1. Connect ACT-IR220L+/200L serial adapter to the COM Port of Desktop PC.
2. Startup your computer system
3. Click on **Control Panel**.
4. Double Click **Add/Remove Hardware**.
5. On **Welcome to the Add/Remove Hardware wizard**, click **Next>**.



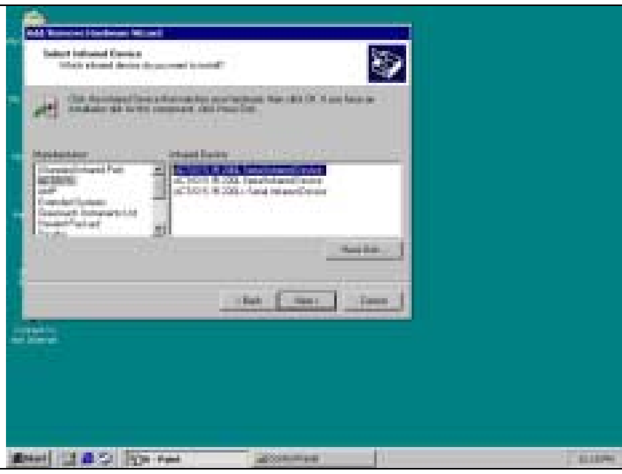
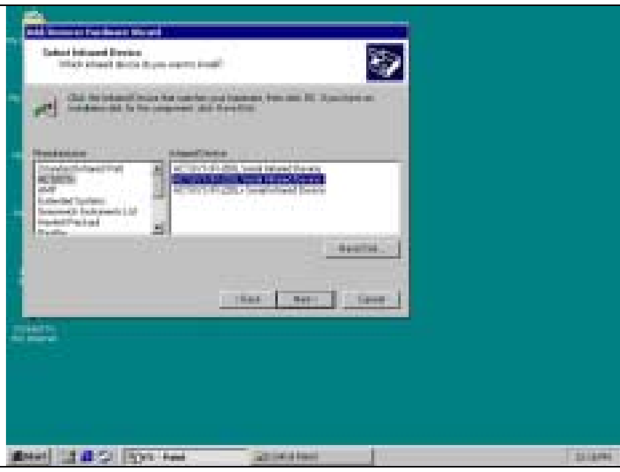
6. Choose **Add/Troubleshoot a device**, then click **Next>**. You may have to wait a while when the wizard searches for Plug and Play hardware.



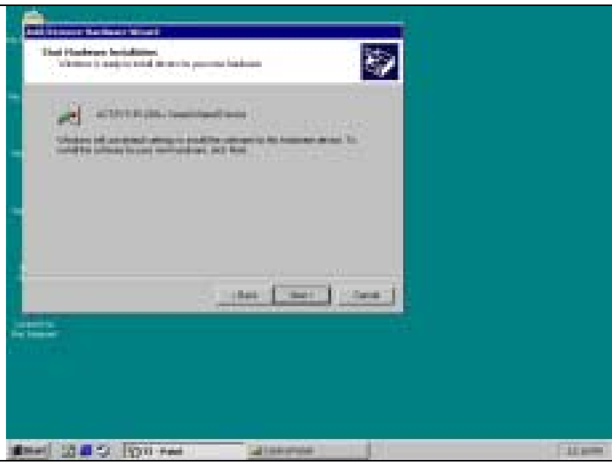
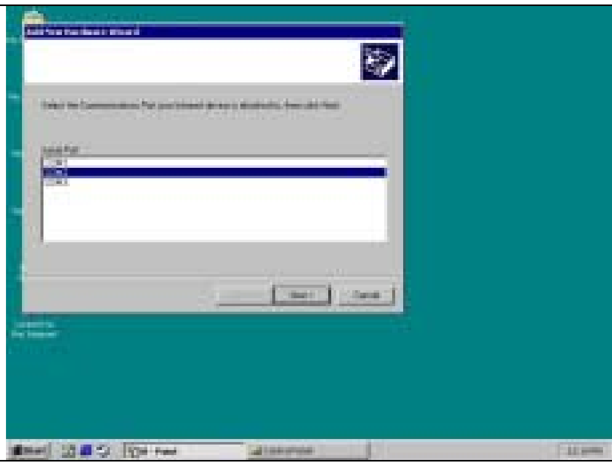
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7. Highlight **ADD a new drive** then click **Next**.	
8. Choose **No, I want select the hardware form a list** then click **OK**	
9. Select the **Infrared device** from the **Hardware types**.	

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10. From **Manufacturers** list, choose **ACTiSYS**, from **Infrared Device** list, choose **ACTiSYS IR-200L Serial Infrared Device** for IR200L; click **Next>**.	
11. Choose **ACTiSYS IR-220L Serial Infrared Device** for IR220L, click **Next>**.	
12. **ACTiSYS IR-220L+ Serial Infrared Device** for IR220L+, click **Next>**.	

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13. Click **Next>**.	
14. Choose **COM2** in most case, then click **Next>**.	

15. Click **Finish**.

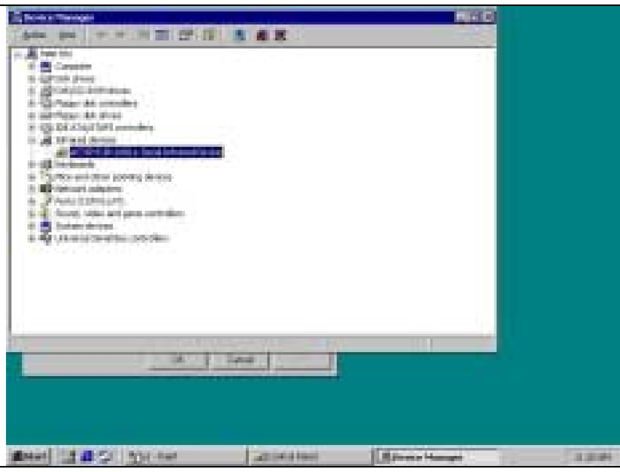
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WINDOWS 2000 UNISTALLATION

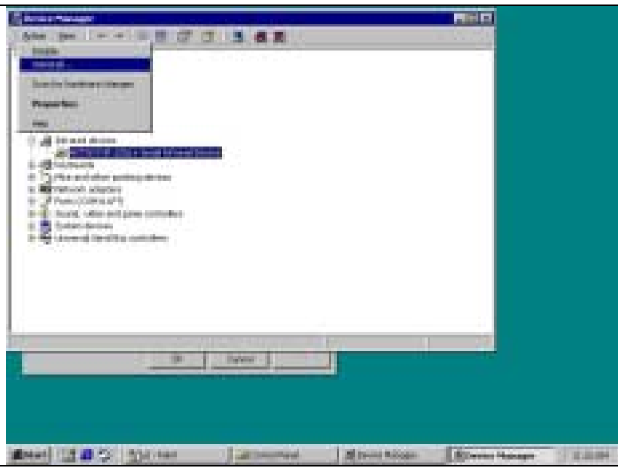
1. Startup your computer system.
2. Click on **Control Panel**.
3. Double click **System** Icon.
4. Click on **Hardware** tab, then click **Device Manager** button.



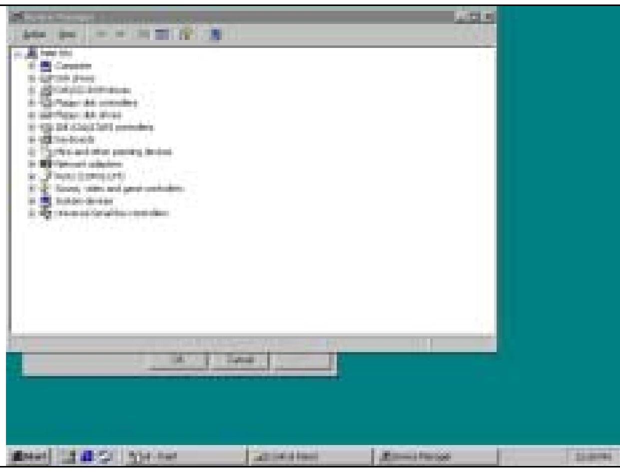
5. Click on **Infrared devices**, then highlight **ACTiSYS IR-220L+Serial Infrared Device**.



6. Click **Action** and then **Uninstall**.



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7. The device has been uninstalled and close device manager, restart your computer.	

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WINDOWS ME INSTALLATION GUIDE

Precaution: If you have not verified your Bios setup at this point, we strongly recommend you to refer back to the Bios verification section and verify your Bios setup again.

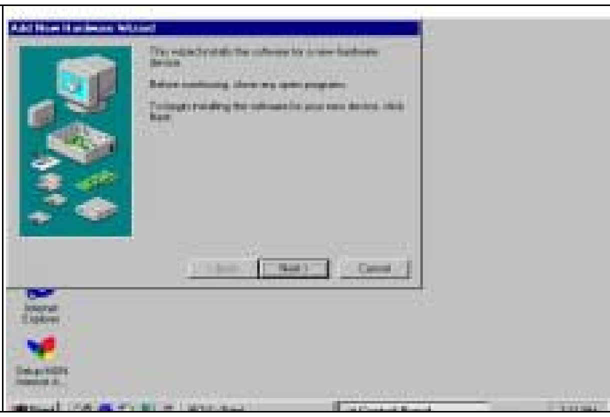
Note: Verify that the Comport you will use to install ACT-IR220L/220L+/200L is not being already used or occupied by any hardware or any software. We recommend users to completely delete any files or drivers that can interrupt clean fresh installation of our product.

Note: You are trying to install a SIR product. Your operating system can always be upgraded to use FIR products. However you can never downgrade from a FIR product to SIR product, therefore verify that you have on previously installed any FIR products on your system.

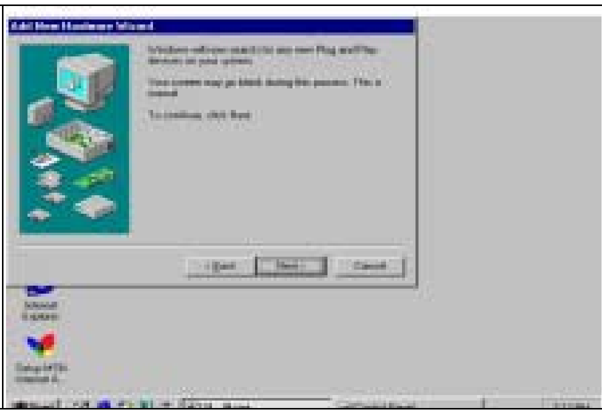
Note: You may experience problems, If you are using a beta version of **Windows ME** or a old upgrade edition of **Windows ME**. Some **German** version of Windows ME has also known to lack virtual Comports. This problem may make are device incapable of communicating with other devices.

Following are the instructions to properly install the ACT-IR220L+/220L/200L Dongle. You need a computer system with at least one serial port and Windows ME already installed. The best choice for the system is a desktop.

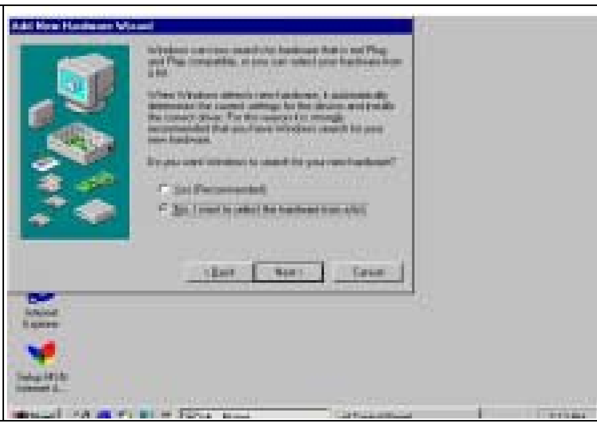
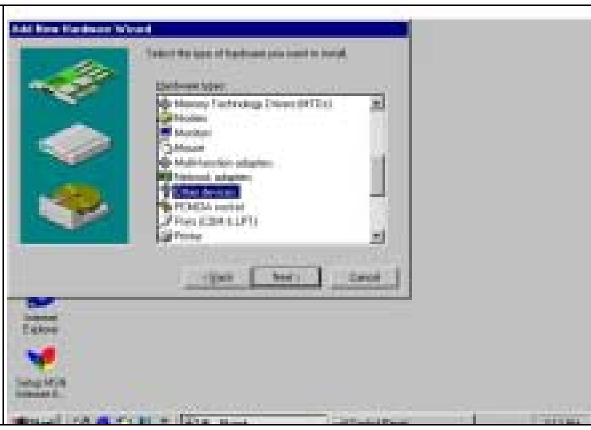
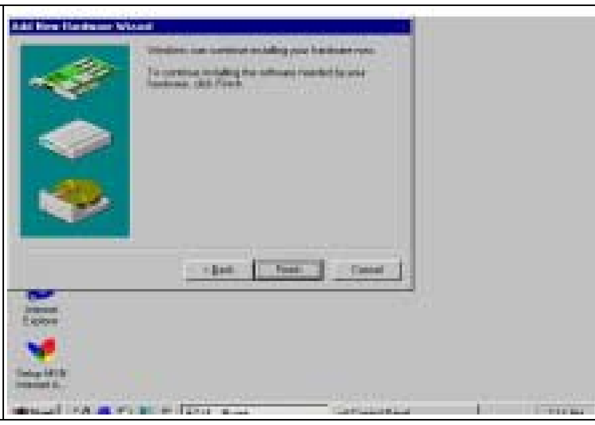
1. Connect ACT-IR220L+/220L/200L serial adapter to the COM Port of Desktop PC.
2. Boot up your computer system.
3. Double Click **My Computer** icon on DeskTop
4. Double click **Control Panel** icon.
5. Double click **Add New Hardware** icon.
6. On the following boxes, click **Next>.**



7. Click **Next>.**



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8. Choose **No I want to select the hardware from a list**, then click **Next>**.	
9. If you can not find Infrared device from **Hardware types** list, choose **Other devices** from the **Hardware types** list, then click **Next >.** Otherwise go to step **16.**	
10. From **Manufacturers** list, choose **(legacy serial infrared device),** from **Models** list, **Choose ACT-IR200L Infrared Wireless Interface,** then click **Next>**.	
11. Click **Finish**.	

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12. Double click **Add New Hardware** icon.	
13. Click **Next>.**	
14. **Click Next>.**	
15. Choose **No I want select the hardware from list**, then click **Next>.**	

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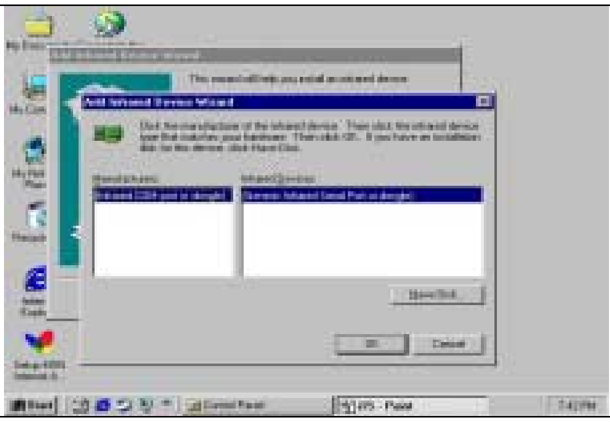
16. Highlight **Infrared device** from **Hardware types list**. Then click **Next>**



17. Click **Next>**.



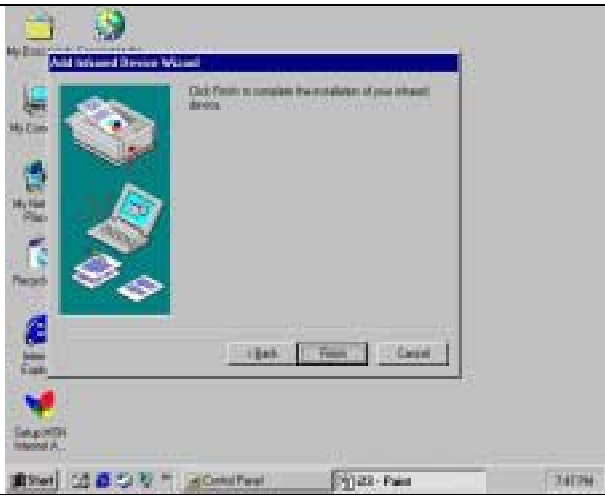
18. Click **Next>**



19. If your device is IR200L, choose **ACTiSYS IR200L**, click **Next>**.



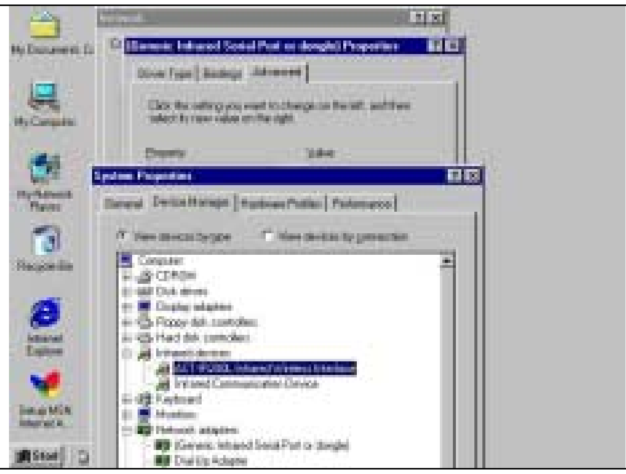
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20. If your device is physically connected to COM2, highlight **Communications ports (COM2),** then click **Next>**.	
21. Click **Next>**.	
22. Click **Finish**	

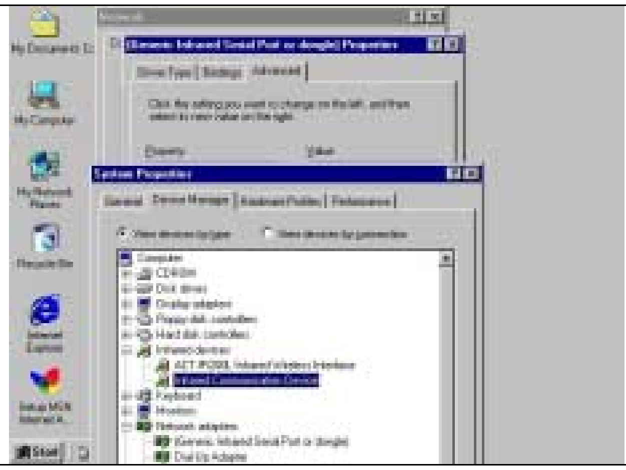
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WINDOWS ME UNINSTALLATION GUIDE

1. Double click **System** icon on **Control Panel**.
2. Go to Device Manager, highlight the items in the **Infrared devices**, then click **Remove** button.



3. Highlight the items in the **Infrared devices**, then click **Remove** button.



4. Highlight **(Generic Infrared Serial Port or dongle),** then click **Remove** button. Click **OK** button.



5. The device has been successfully uninstalled.

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WINDOWS XP INSTALLATION GUIDE

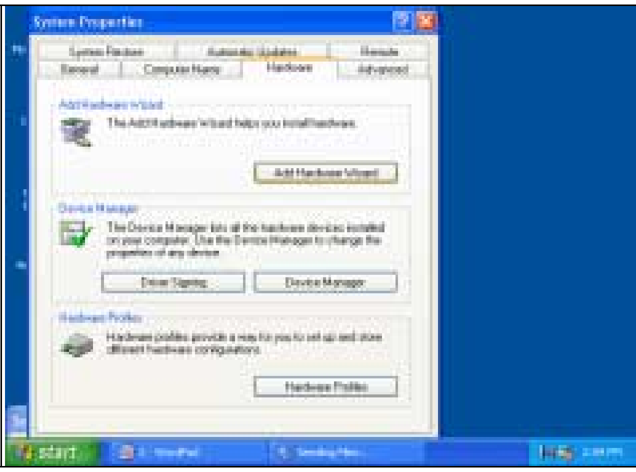
1. Highlight **My Computer**, right click



2. Highlight **Properties**, left click



3. Click **Add New Hardware Wizard**.



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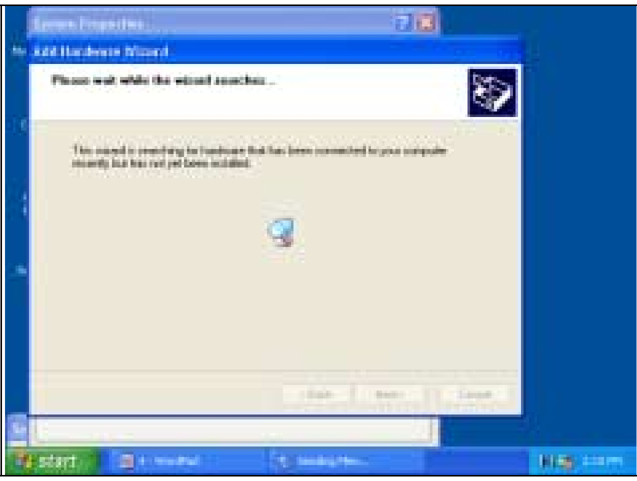
4. Click **Next**.



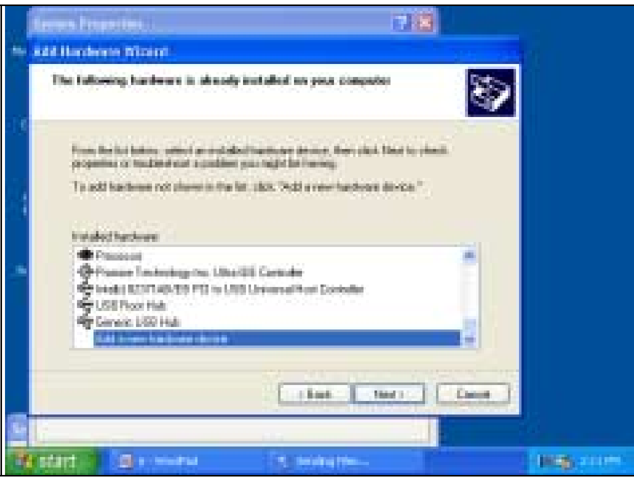
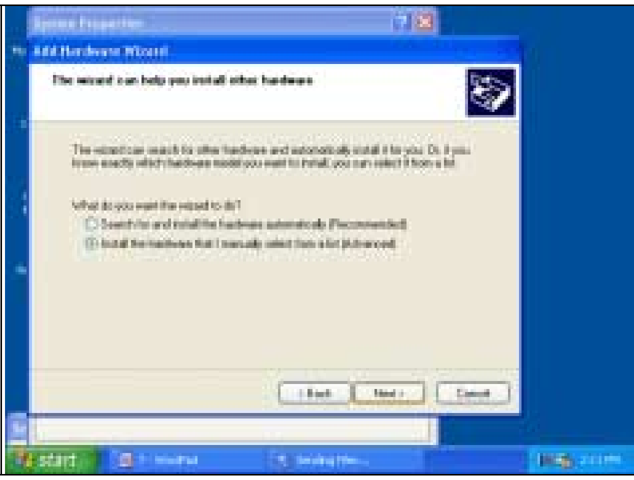
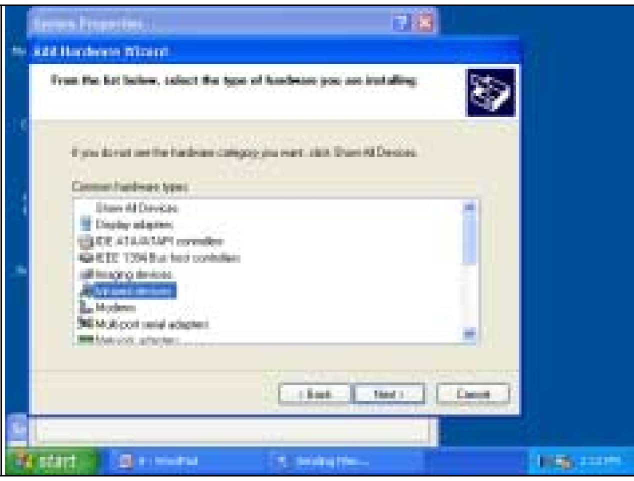
5. Choose **Yes**, **I have already……………..** then click **Next>**.



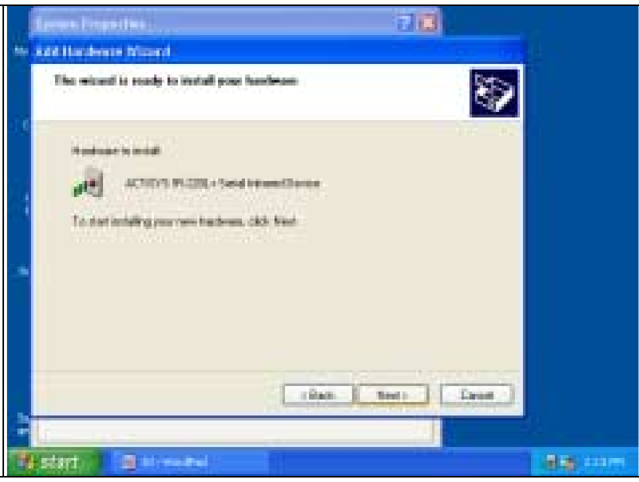
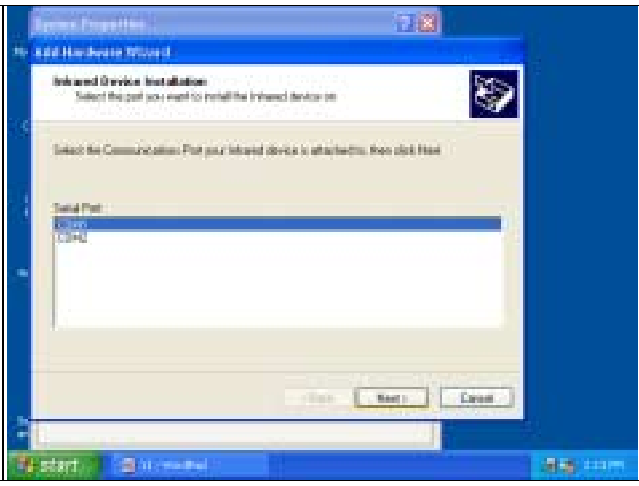
6. Wait processing



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7. Choose **Add a new hardware device**, then click **Next>**.	
8. Choose **install the hardware that I manually select from a list (Advanced)**, then click **Next**.	
9. Choose **Infrared devices**, then click **Next>**	

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10. Choose respective ACT model, then click **Next>**	
11. Click **Next>**	
12. Choose the Com port which the device physically connected, click **Next>**	

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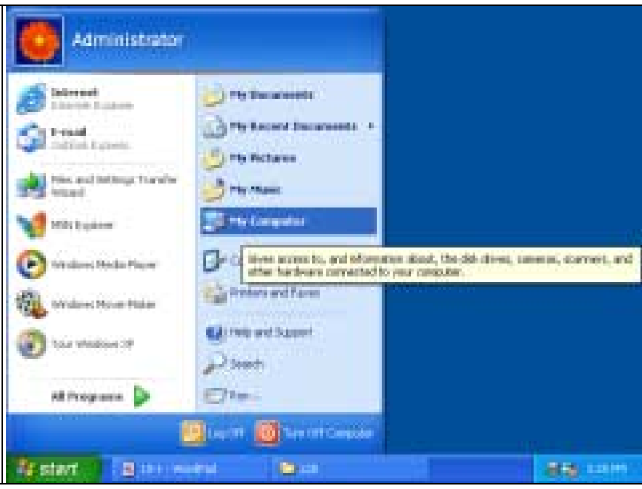
13. Click **Finish**



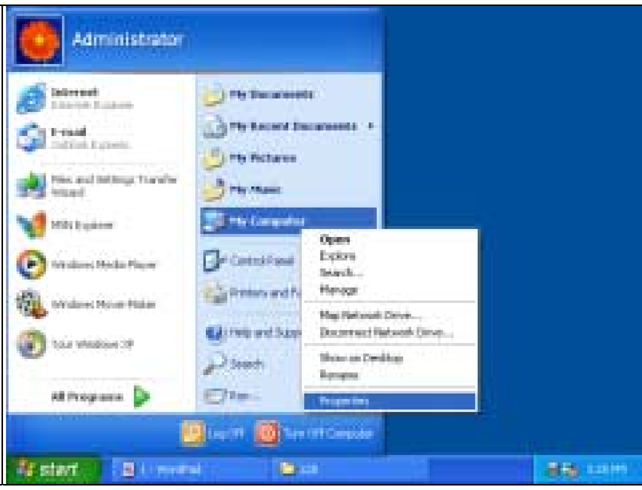
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WINDOWS XP UN-INSTALLATION GUIDE

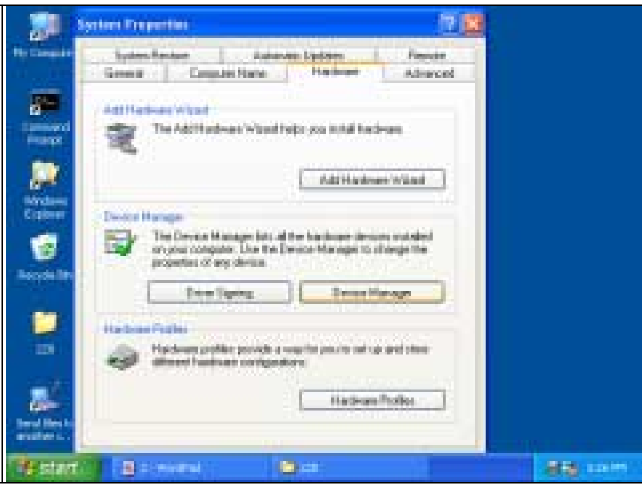
1. Highlight **My Computer**, then right click.



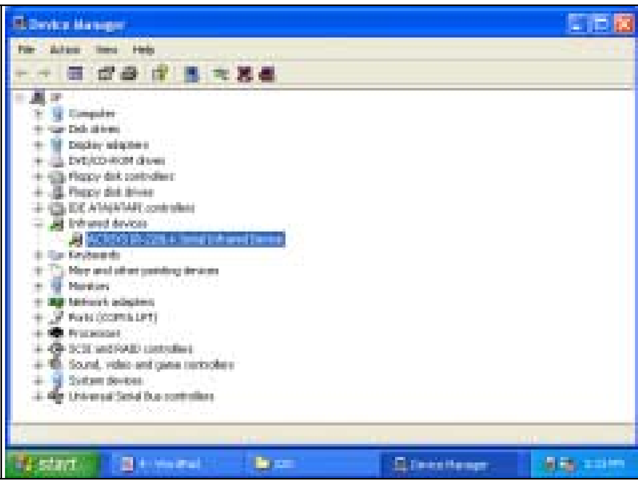
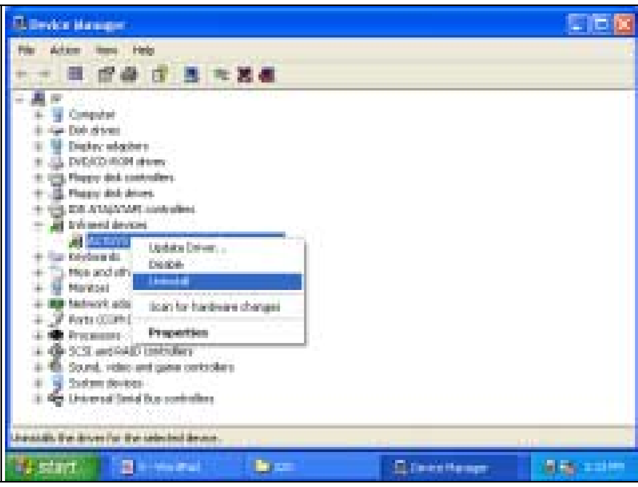
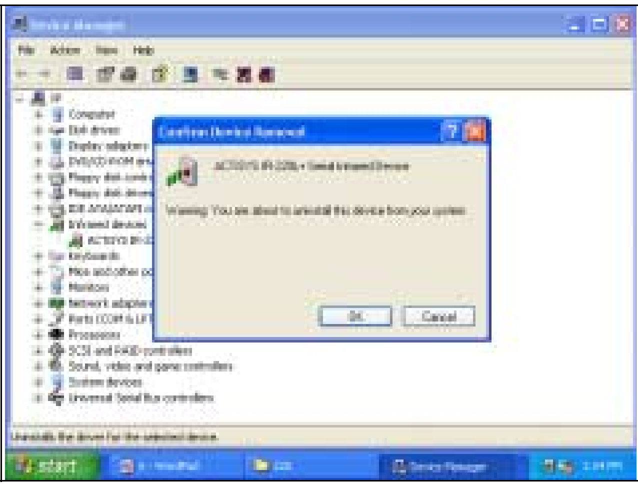
2. Highlight **Properties**, then left click



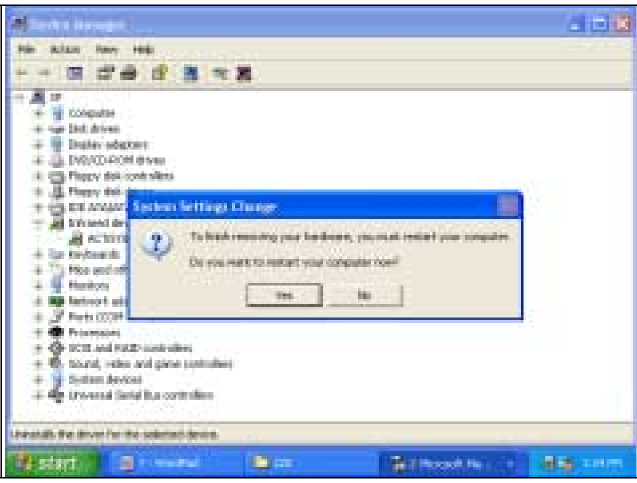
3. Click **Device Manager**



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4. Highlight the items under **Infrared device**, then right click.	
5. Click **Uninstall**	
6. Click **OK**, you have successfully uninstalled the device on your system.	

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7. Click **OK**, you have successfully uninstalled the device on your system.	

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TROUBLE SHOOTING

For help on general and miscellaneous problems you may be experiencing with your printing, refer to the following pages for possible solutions. Look up your problem and try the solution.

SYMPTOM	PROBLEM	Solution
Can not establish link (General)	1. The two IR devices are not aligned properly. 2. Distance is too near or far. 3. The device is inactivated. 4. The device is not installed properly	1. Properly align them again 2. Move one device to a proper distance. 3. Activate it by IR monitor. 4. Refer to Un-installation Guide to remove the device, then reinstall again.
ACT-IR200L/220L+ is connected to and takes power only from the serial port of the notebook computer.	The power-saving feature in the notebook computer either stops or reduces power output from the signal lines of the serial port to the ACT-IR200L/220L+ devices.	1. Set the “Power Management” control to “Advanced” or “Off” to enable power supplied from computer serial port to ACT-IR200L/220L+ devices. 2. Go to Integrate Peripheral to set the COM port to “Infrared”. 3. Do not install more than one infrared devices on one computer.
File Transfer between IR-equipped PDA and ACT-IR device-attached host computer stops before finishing up and an error message appears.	1. The infrared communication is interfered. For example, something blocks out the infrared beam or the burst of string light source, etc. 2. Software does not support the IrDA controller chip on the motherboard. 3. Serial port is occupied and not available for IR transmission.	1. Check to find out the source of interference and eliminate it before trying again. 2. If you were restoring data, simply try again. 3. If you were doing backup something the PDA does not reset its flags and keeps stopping at the same position unless you press the RESET button once. Be very careful. DO NOT initialize (press ON key and RESET button at the same time) your PDA. Otherwise you may lose all your data. 4. Make proper model # selection in the software as specified in your PC system user`s manual. 5. Make sure to disconnect modem, etc. from the serial port to make it available for IR transmission.

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SPECIFICATIONS

Model: ACT-IR220L+/ACT-IR220L/ACT-IR200L
Carrier: Infrared radiation (peak wavelength: 850 to 1050nm)
Sub-Carrier: 500 KHz for SHARP ASK-IR and ASK(37KHz) for TV remote spec.(IR200L only)
Communication Distance:
IR200L From 0 cm to 80 cm.
For best results, from 20 cm (7.9in) to 60 cm (1 ft. 11.6 in)

IR220L From0 cm to 250 cm.
For best results, from10 cm (3.95 in) to 150 cm (4 ft. 11.05 in)

SHARP ASK-IR:

Baudrate: 9600 bps to 38.4K bps (IR200L only)
Parity Bit: Odd
Data: 8 bit
Stop Bit: 1 bit
Error Check: Check Sum

IrDA-IR:

Baudrate: 9.6,19.2,(38.4),57.6,115.2K bps (IR200L/220L+)
Parity Bit: None
Data: 8 bit
Stop Bit: 1 bit
Error Check: CRC

Serial Interface: Cable Interface (to host computer)
Signal Level: RS-232 Standards
Connector: DB-9 female connector
Power Source: PC RS-232 Serial Port
Power Consumption: 0.30mW (11mA max.)
Operating temperature: 0^oC to 40^oC (32^oF to 104^oF)
Dimensions (Inches): 2.0”L x 1.63”W x 0.62”H 51mm x 41mm x 16mm
Weight: 2.0 oz (54 gr.)
Accessories: User Manual
Optional Accessories: DB9/DB25 Converter
Windows 95/98/ME/2000: IR Software

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Pin Assignments: Serial Interface DB9 female connector

Pin	Name	Symbol	I/O	Function
2	Receive Data	RXD	I	Input signal
3	Transmit Data	TXD	O	Output signal
4	Data Terminal Ready	DTR	O	For data link to build up and maintain
5	Signal Ground	GND	-	Reference ground (0V) for all signals
7	Request to send	RTS	O	Output signal from host computer
8	Clear to send	CTS	I	Input signal to host computer

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This warranty does not apply to any appearance items of the Product, any consumable items such as paper, ink ribbon, or batteries supplied with the Product, or to any equipment or any hardware, software, firmware, or peripheral other than the Product. This warranty does not apply to any Product the exterior of which has been damaged or defected, which has been subjected to misuse, abnormal service or handling, or which has been altered or modified in design, construction or interfacing. **Tampering With Label Voids Warranty**.

In order to enforce the rights under this limited warranty, the purchaser should mail, ship, or carry the Product, together with proof of purchase, to ACTiSYS.
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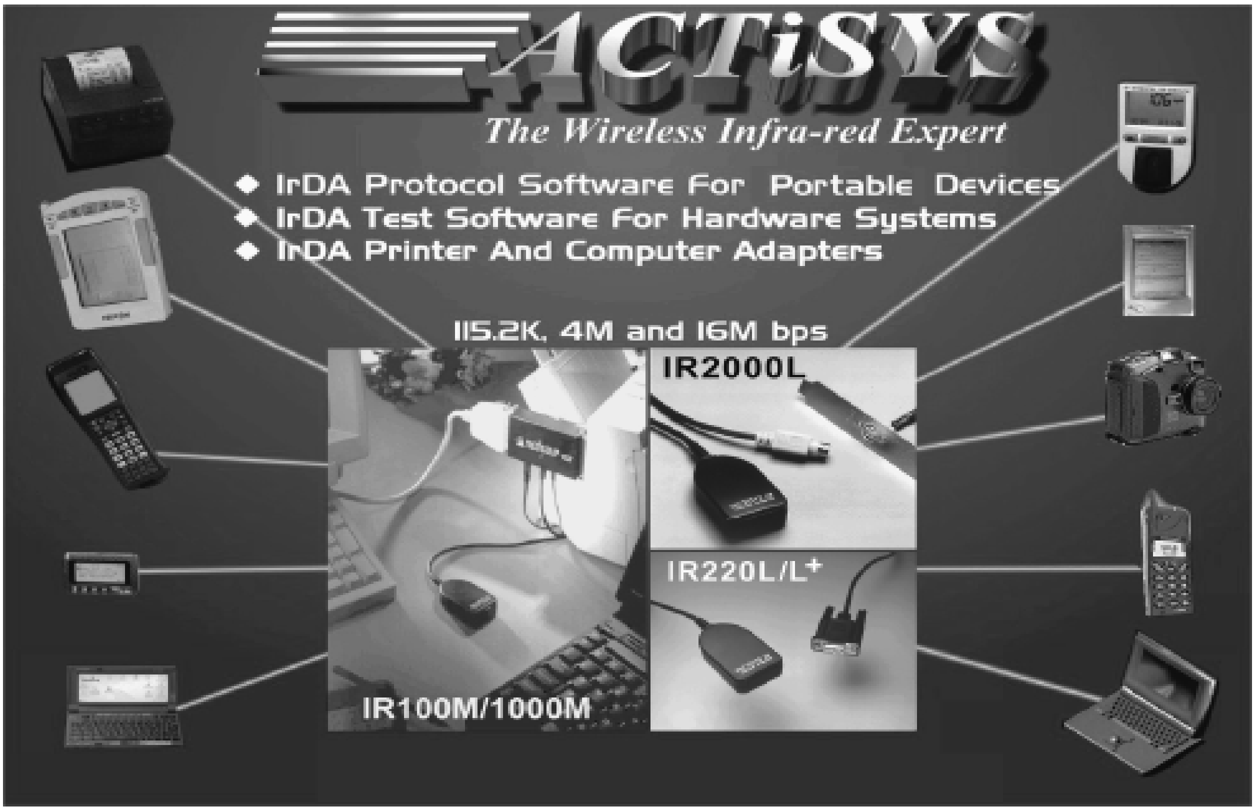
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